

AMENDMENTS TO THE CLAIMS

1-23. (Cancelled)

24. (Previously presented) An integrated information communication system (ICS), wherein:

an ICS network address for discriminating an ICS logic terminal is assigned to an ICS logic terminal of a terminal in a user communication line;

when a set of ICS logic terminal discrimination information and a receiver ICS user address is decided, an ICS network communication line to transfer an ICS network frame between an access control apparatus at a sending side and an access control apparatus at a receiving side is uniquely decided;

an ICS network address to decide a destination of the ICS network frame to specify the ICS network communication line is defined by said access control apparatus at the sending side,

an external ICS user frame having a unique ICS user address system ADX is inputted to said access control apparatus at the sending side from the user communication line via the ICS logic terminal;

when ICS logic terminal discrimination information is inputted by the ICS user frame, the sender ICS user address and the receiver ICS user address in the ICS user frame are found to be registered in a conversion table in said access control apparatus at the sending side;

the ICS user frame is converted to an internal ICS network frame having an ICS network address system ADS;

the ICS network frame includes a network control field which is operable to store at least the ICS network address to specify the ICS network communication line;

a destination of the ICS network frame is judged, under a rule of the ICS network address system ADS, by said access control apparatus of the sending side, and the ICS network frame is then transferred in the ICS network communication line; and

when the ICS network frame is reached at said access control apparatus at the receiving side, the ICS user frame is restored from the ICS network frame, is transferred in another user communication line via an ICS logic terminal of said access control

apparatus at the receiving side, and is reached at an external information communication equipment.

25. (Previously presented) An integrated information communication system according to claim 24, wherein the conversion table includes a priority degree, the ICS network frame includes a priority degree obtained from the conversion table, and the ICS network frame is sent under the priority degree of the ICS network frame.

26. (Previously presented) An integrated information communication system according to claim 24, wherein the conversion table includes two or more records, a set of the ICS network address for specifying the receiver ICS user address and the ICS network communication line are respectively different for each record to a same set of the ICS logic terminal discrimination information and sender ICS user address, and a destination of the ICS user frame is changeable by changing the receiver ICS user address.

27. (Previously presented) An integrated information communication system according to claim 24, wherein an intra-corporation communication and an inter-corporation communication are enabled in correspondence that the sender ICS user address and receiver ICS user address registered in the conversion table are an intra-corporation communication address or an inter-corporation communication address.

28-121. (Cancelled)

122. (Previously presented) An integrated information communication system (ICS) comprising at least one access control apparatus each including a conversion table, wherein:

said access control apparatus is operable to convert an external ICS user frame having a unique ICS user address system ADX into an inner ICS network frame having an ICS network address system ADS based on an administration of the conversion table in said access control apparatus

the ICS network frame comprises a network control field and a network data field;

the network control field is operable to store addresses according to the ICS network address system ADS, and the network data field includes the ICS user frame;

said access control apparatus is operable to send the ICS network frame inside said integrated information communication system according to a rule of the ICS network address system ADS;

said access control apparatus is operable to restore the ICS user frame from the ICS network frame transfer the restored ICS user frame to another external information communication equipment;

an internal address system is defined regardless of an external address system;

the ICS network address is assigned to an ICS logic terminal;

a receiving ICS network address is registered as a record in the conversion table so as to settle automatically when a group of ICS logic terminal discriminating information, a sender ICS user address and a receiver ICS user address is determined; and

said access control apparatus is operable to convert the ICS user frame into the ICS network frame upon determining that all of the ICS logic terminals inputted from the ICS user frame, the sender ICS user address in the ICS user frame and the receiver ICS user address are registered in the conversion table.

123. (Previously presented) An integrated information communication system according to Claim 122, wherein the ICS user frame is operable to store a digitalized telephone voice.

124. (Previously presented) An integrated information communication system according to Claim 122, wherein an IP telephone is connected with said integrated information communication system, and a digitalized telephone voice is transferred therein.

125-144. (Cancelled)

145. (Previously presented) An integrated information communication system comprising an access control apparatus and a receiver, wherein:

said access control apparatus is operable to receive a transmission ICS user frame from an ICS logical terminal of said access control apparatus at a termination of a user communication line, and determine an ICS network address of an internal ICS network frame based on an ICS user address given to an ICS logical terminal at a transmitting side and an external transmission ICS user frame, and determine an ICS logical terminal at a receiving side to which a transmission ICS network frame is to be transmitted based on the determined ICS network address; and

said receiver of said integrated information communication system is operable to embed, in a roaming terminal, an ICS domain name and an ICS user address of a roaming terminal user, a special roaming special service number for the roaming terminal, an ICS user address of a connection server, and a code function and code-related data, and when the roaming terminal is connected to another access control apparatus and starts inter-company communication, the ICS domain name, the code roaming special service number, the ICS user address of the connection server, the code function, and the code related data are used.

146. (Previously presented) An integrated information communication system comprising an access control device at a transmitting side, an access control device at a receiving side, and a receiver, wherein:

said access control device at the transmitting side is operable to receive a transmission ICS user frame inputted from an ICS logical terminal at a termination of a user communication line, determine a set of ICS logical terminal identification information of a transmitting side and a receiver ICS user address in a transmission ICS user frame is determined, and determine an ICS network communication line in which an ICS network frame is transferred between said access control apparatus at the transmitting side and said access control apparatus at the receiving side; and

said receiver of said integrated information communication system is operable to embed, in a roaming terminal, an ICS domain name and an ICS user address of a roaming terminal user, a special roaming special service number for the roaming terminal, an ICS

user address of a connection server, and a code function and code related data, and when the roaming terminal is connected to another access control apparatus and starts an inter-company communication, the ICS domain name, the code roaming special service number, the ICS user address of the connection server, the code function, and the code related data are used.

147-422. (Cancelled)